REMARKS/ARGUMENTS

Claims 9-11, 14-17, 26 and 27 are currently pending in this application.

Amendments to Claims

Applicants have amended Claim 9 by adding a functional limitation "wherein the nucleic acid encoding said polypeptide is overexpressed in psoriasis pheripheral blood mononuclear cells as compared to normal pheripheral blood mononuclear cells." Claims 10, 14, 16 and 17 have been amended to replace "a polypeptide according to Claim 9" by "the polypeptide according to Claim 9." Claims 14, 16 and 17 have been further amended to delete parts (c) and (d) in the claims. Claims 26 and 27 have been added. The amendments do not introduce any new matter and are well – supported by the specification originally filed. Support for the amendment of Claim 9 can be found, for example, at Example 1 (page 73 of the instant specification). Support for the added Claims 26 and 27 can be found at page 8, lines 10-40 of the Specification.

Objections

The Examiner asserts that the title of the invention is not descriptive. (Page 2 of the instant Office Action). Applicants have amended the title to recite "THE PRO84179 POLYPEPTIDES."

Claim 10 is objected to for reciting "a polypeptide according to Claim 9." The Examiner suggests that the term "a" is replaced by "the." (Page 2 of the instant Office Action).

Applicants have amended Claim 10 by replacing "a" by "the." The objection is thereby rendered moot.

Claims 14, 16 and 17 are objected to for encompassing a non-elected subject matter, parts (c) and (d). (Page 3 of the instant Office Action).

Claims 14, 16 and 17 have been amended by deleting parts (c) and (d). The objection is thereby rendered moot.

Rejection Under 35 U.S.C. §112, First Paragraph

Claims 9-11 and 14-17 stand rejected under 35 U.S.C. §112, first paragraph, because the

specification, while being enabling for claims limited in scope to an isolated polypeptide having an amino acid sequence of SEQ ID NO:20, allegedly does not reasonably provide enablement for the claims to any variant of SEQ ID NO:20. The Examiner alleges that the specification does not disclose any characteristics other than the sequences, nor any functional property of the PRO84197 polypeptide. Thus, the Examiner alleges that there is no variants of the polypeptide with any functional activity can be identified. (Page 4 of the instant Office Action).

Applicants have amended Claim 9 by reciting a functional limitation "wherein the nucleic acid encoding said polypeptide is over expressed in psoriasis pheripheral blood mononuclear cells as compared to normal pheripheral blood mononuclear cells." As a result, the claimed polypeptide variants are defined by both a functional property and a structural property.

Applicants have provided the PRO sequence SEQ ID NO:20 and its encoding nucleic acid sequence. The specification further describes methods for the determination of percent identity between two amino acid sequences. (Pages 13-15). In fact, the specification teaches specific parameters to be associated with the term "percent identity" as applied to the present invention. Accordingly, one of skill in the art could identify whether a variant PRO84197 polypeptide shares at least 80% sequence identity with SEQ ID NO:20. Once such an amino acid sequence is identified, the specification sets forth methods for making the amino acid sequences (pages 44-47) and methods of preparing the PRO polypeptides. (Pages 49-54).

The present application also describes methods using microarray techniques for identifying mRNAs which are over expressed in psoriasis pheripheral blood mononuclear cells (PBMCs). Example 1 of the present application provides step-by-step guidelines and protocols for the microarray analysis. By following the disclosure in the specification, one skilled in the art can easily test whether the nucleic acid encoding a variant PRO84197 protein is over expressed in psoriasis pheripheral blood mononuclear cells. As a result, one of skill in the art could identify whether the variant PRO84197 polypeptide falls within the parameters of the claimed invention. Thus, one skilled in the art given the disclosure in the specification would be able to make and use the claimed amino acid sequence. Furthermore, one of ordinary skill in the art has a sufficient level of technical competence to identify sequences with at least 80% identity to SEQ

ID NO:20 with the added functional limitation. Accordingly, one of ordinary skill could practice the claimed invention without undue experimentation.

The Examiner further alleges that the specification provide no guidance or working examples as to how the skilled artisan makes a variant associated with psoriasis. (Page 4 of the instant Office Action).

As discussed above, Applicants have provided detailed guidelines in the specification on how to make and use the claimed polypeptide variants. In addition, as discussed in the M.P.E.P. §2164.08, "[t]he specification need not contain an example if the invention is otherwise disclosed in such manner that one skilled in the art will be able to practice it without an undue amount of experimentation. *In re Borkowski*, 422 F.2d 904, 908, 164 U.S.P.Q. 642, 645 (C.C.P.A. 1970)." Given that one of ordinary skill in the art could make and use the claimed variant sequences without any undue experimentation, there is no requirement that the specification provide examples of variant polypeptides.

The Examiner also asserts that even if such variants exist in psoriasis, what might happen regarding genetic variations to the polypeptide of SEQ ID NO:20 are completely unpredictable. The Examiner then concludes that there is no way a skilled artisan to imagine the detailed structure of the encompassed variants, and to make such variants. (Page 4 of the instant Office Action).

Applicants respectfully disagree and submit that the Examiner's concerns are not valid because one of ordinary skilled can make candidate variants with standard methods known in the art and disclosed in the specification. and then test the candidate variants in the procedures described in detail in Example 1 to identify the desired variants. As indicated above, given the specification, one skilled in the art could readily identify variants or isoforms of this PRO84197 sequence, and test the nucleic acids encoding such polypeptides to see if they are over expressed in psoriasis using the methods of Example 1. This would not require undue experimentation.

The claims currently recite polypeptide sequences associated with a biological activity. This biological activity with a well-defined and relatively high degree of sequence identity, and the general knowledge in the art at the time the invention was made, is believed to sufficiently

define the claimed genus such that, one skilled in the art, at the effective date of the present application, would have known how to make and use the claimed peptide sequence without undue experimentation. As the M.P.E.P. states, "[t]he fact that experimentation may be complex does not necessarily make it undue, if the art typically engages in such experimentation." (M.P.E.P. 2164.01).

Written Description

Claims 9-11 and 14-17 stand rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which allegedly was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s) at the time the application was filed, had possession of the claimed invention. In particular, the Office Action states that the claims do not require that the encoded polypeptides possess any particular activity, or other distinguishing features. (Page 5 of the instant Office Action).

Applicants respectfully disagree and note that the claimed polypeptides in amended Claim 9 have a specific functional property of having an encoding nucleic acid that is overexpressed in psoriasis PBMC cells.

Applicants point out that, as discussed in the "Enablement" section, the specification describes methods for the determination of percent identity between two amino acid sequence. Applicants have provided native PRO sequence SEQ ID NO:20 and its encoding nuclei acids. The present application describes methods for identifying mRNAs which are over expressed in psoriasis PBMC cells. Example 1 of the present application provides step-by-step guidelines and protocols for the expression analysis. By following the disclosure in the specification, one skilled in the art can easily test whether a variant PRO84197 protein or encoding mRNA is overexpressed in psoriasis PBMC cells. Accordingly, a person skilled in the art is able to recognize that Applicants were in possession of the members of the claimed genus having the distinguishing feature as described at the effective filing date of the present application.

Applicants further draw the Examiner's attention to Example 14 of the Synopsis of Application of Written Description Guidelines issued by the U.S. Patent Office clearly states that

protein variants meet the requirements of 35 U.S.C. §112, first paragraph, as providing adequate written description for the claimed invention even if the specification contemplates but does not exemplify variants of the protein if: (1) the procedures for making such variant proteins are routine in the art, (2) the specification provides an assay for detecting the functional activity of the protein, and (3) the variant proteins possess the specified functional activity and a defined degree of sequence identity to the reference sequence. The instant claims are in the format exemplified by Example 14. The procedures for making the such variant proteins are well known in the art and described in the specification. The specification also provides assays, shown in Example 1, for detecting the recited functional activity of the claimed variants. Finally, the claimed variant proteins possess both the specified functional activity and a defined degree of sequence identity to the reference sequence, SEQ ID NO:20. Accordingly, the claimed variants meet the standards set forth in the Written Description Guidelines and exemplified by Example 14.

The Examiner relies on *Fiers v. Revel* (25 U.S.P.Q.2d 1601 (CAFC 1993)) and *Amgen v. Chugai Pharmaceutical Co.* Ltd (18 U.S.P.Q.2d 1106 (1991)) to allege that adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of isolating it. (Page 5 of the instant Office Action).

Applicants respectfully disagree and submit that *Fiers v. Revel* and *Amgen v. Chugai* addressed conception and the written description requirement in the context of DNA-related inventions. The *Amgen* court held that conception of a DNA invention "has not been achieved until reduction to practice has occurred, *i.e.*, until after the gene has been isolated." 927 F.2d 1200 (Fed. Cir.), *cert. denied*, 502 U.S. 856 (1991), at 1206. The *Fiers* court extended this decision into the written description arena, holding that "[i]f a conception of a DNA requires a precise definition, such as by structure, formula, chemical name, or physical properties, as we have held, then a description also requires that degree of specificity." *Fiers*, 984 F.2d at 1171. Since Claims 9-11 and 14-17 are directed to polypeptides, *Fiers* and *Amgen* are distinguished on the facts and do not apply. More recently, in *Enzo Biochem., Inc. v. Genprobe, Inc.* 296 F.3d 1316 (Fed. Cir. 2002), the court adopted the standard that "the written description requirement

can be met by 'showing that the invention is complete by disclosure of sufficiently detailed, relevant identifying characteristics, . . . *i.e.*, complete or partial structure, other physical and/or chemical properties, functional characteristics when coupled with a known or disclosed correlation between function and structure, or some combination of such characteristics." *Id.* at 1324. While the invention in *Enzo* was still a DNA, the holding has been treated as being applicable to proteins as well. Indeed, the court adopted the standard from the USPTO's Written Description Examination Guidelines, which apply to both proteins and nucleic acids.

The Examiner relies on *Fiddes v. Baird* (30 U.S.P.Q.2d 1481 at 1483) to assert that one cannot describe what one has not been conceived allegedly because in *Fiddes*, claims directed to mammalian FGF's were found to be unpatentable due to lack of written description for that broad claim where the specification only provide the bovine sequence. (Page 6 of the instant Office Action).

Applicants respectfully submit that the present application is different from *Fiddes v. Baird*. In *Fiddes v. Baird.*, a common structure features, such as the sequence similarity, was not provided for the claimed genus. In contrast, Claims 9-11 and 14-17 clearly define both common structural features (sharing at least 80% sequence identity to a known sequence) and functional limitations (the encoding nucleic acids being overexpressed in psoriasis PBMC cells) of the claimed genus. Therefore, the holding in *Fiddes v. Baird.* does not apply to the present claims.

Accordingly, the specification provides adequate written description for the polypeptides having at least 80% identity to SEQ ID NO:20 wherein the nucleic acid encoding the polypeptide is over expressed in psoriasis PBMC cells.

In view of the above arguments, Applicants respectfully request that the rejection of Claims 9-11 and 14-17 under 35 U.S.C. §112, first paragraph, be withdrawn.

CONCLUSION

In conclusion, the present application is believed to be in *prima facie* condition for allowance, and an early action to that effect is respectfully solicited. Should there be any further issues outstanding, the Examiner is invited to contact the undersigned attorney at the telephone

number shown below.

Please charge any additional fees, including fees for additional extension of time, or credit overpayment to Deposit Account No. **08-1641** (referencing Attorney's Docket No. **39766.0264 R1**).

Respectfully submitted,

Date: January 22, 2008

By:_____
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